

**REMARKS**

Claims 1-35 are pending in the application.

Claims 1-35 have been rejected.

Claims 1, 5-8, 10, 12, 13, 18, 19, 21, 23, 24, 26, 28, 30, 32 and 34 have been amended.

*Rejection of Claims under 35 U.S.C. § 102*

Claims 1-6, 9-18, 20-28, and 30-34 stand rejected under 35 U.S.C. § 102(b) as being unpatentable in light of U.S. Patent No. 5,710,650 issued to Dugan (“Dugan”). Applicants respectfully traverse this rejection.

The Office Action relies on Dugan in rejecting each of the listed claims. While not conceding that Dugan is prior art, but instead to expedite prosecution, Applicants have chosen to traverse-in-part and, in part, overcome the Examiner’s rejection by amendments that more clearly distinguish the claims over Dugan. Applicants’ amendments are made without prejudice to Applicants’ right to establish, for example, in a continuing application, that Dugan is not prior to an invention now or hereafter claimed.

**Independent Claims 1 and 24:** Applicants respectfully submit that Dugan does not disclose each limitation of Independent Claims 1 and 24, as amended, and therefore Dugan cannot anticipate those claims or any claims that depend therefrom. In the below discussion, Applicants further respond to the positions expressed in the Office Action.

Claims 1 and 24 have each been amended to clarify that an input datastream is decomposed into a plurality of substreams. Applicants respectfully submit that Dugan provides no disclosure of an input datastream being decomposed into a plurality of

substreams. Failing to provide such disclosure, Dugan cannot be said to anticipate these claims.

As support for the rejection of Claims 1 and 24, the Office Action refers to the Dugan Abstract and Figure 1 of Dugan. The cited text in the Abstract states “[t]he circuitry includes circuitry for partitioning the high data rate stream into a plurality of lower datarate data streams.” Applicants submit that Dugan refers in the Abstract to transmitting what could potentially be a single 10 Gb/s optical data stream being instead transmitted as four 2.5 Gb/s wavelength divided streams. The Dugan disclosure never demonstrates a subdivision of an actual high data rate data stream.

Dugan shows a combining of a plurality of low data rate data streams, not a decomposition of a single high data rate data stream. Four sets of 78 Mb/s data streams are initially multiplexed into four 2.5 Gb/s data streams. *See* Dugan, Fig. 1 (16, 18, 20, 22); Fig. 1 (16', 18', 20', 22'); 5:11-24 (“Overhead multiplexer module 12 includes four 32-line groupings. Each 32-line grouping carries data at a rate of 78 Gb/s [sic], including 32-line grouping 16, 32-line grouping 18, 32-line grouping 20, and 32-line grouping 22. ... Application specific integrated circuit 36 generates an output to module 14 on data lines 16', 18', 20' and 22', which operate at a data rate of 2.5 Gb/s.”). The four 2.5 Gb/s data streams are then wavelength division multiplexed into a single optical output. *See* Dugan, Fig. 1 (46, 48); 5:25-37 (“[E]ach line 16”, 18”, 20”, and 22” feeds to 4:1 wavelength division multiplexer circuit 46. The 4:1 wavelength division multiplexer circuit 46 generates optical output 48, which may be amplified as the output of optical transmitter module 14.”).

Therefore, Dugan discloses combining a multitude of low speed (78 Mb/s) input data streams to form four 2.5 Gb/s data streams that are transmitted on one standard

single-mode fiber using multiple wavelengths. Applicants respectfully submit that Dugan does not show the claimed method of taking a single input data stream and decomposing that input data stream into a plurality of sub-streams that are then transmitted over a plurality of channels.

For at least the above reasons, Applicants respectfully submit that Claims 1 and 24, as amended, and all remaining claims dependent therefrom (Claims 2-12 and 25-29) are in condition for allowance and request Examiner's indication of same.

**Independent Claims 13 and 30:** Applicants respectfully submit that Dugan does not disclose each limitation of independent Claims 13 and 30, as amended, and therefore Dugan cannot anticipate those claims or any claims that depend therefrom. In the below discussion, Applicants further respond to the positions expressed in the Office Action.

Claims 13 and 30 have each been amended to clarify that the claimed sub-streams are created by decomposing an input data stream into said sub-streams. The claims have also been amended to clarify that the sub-streams are assembled into a reconstructed output data stream. Applicants respectfully submit that, for the reasons discussed above with regards to Claims 1 and 24, Dugan provides no disclosure of decomposing an input data stream into a plurality of sub-streams as claimed. Without such disclosure, Dugan cannot be said to anticipate these claims.

For at least the above reasons, Applicants respectfully submit that Claims 13 and 30, as amended, and all remaining claims dependent therefrom (Claims 14-23 and 31-35) are in condition for allowance and request Examiner's indication of same. Applicants further note that dependent Claims 5-8, 10, 12, 18, 19, 21, 23, 28, and 34 have been amended to provide consistency with the independent claims from which they depend and to correct certain clerical areas where necessary, unless otherwise indicated herein.

Applicants respectfully submit for the reasons described above with regard to the independent claims, these claims are in condition for allowance and request Examiner's indication of same.

*Rejection of Claims under 35 U.S.C. § 103*

Claims 7, 8, 19, 29 and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dugan in view of U. S. Patent No. 5,867,484 issued to Shaunfield ("Shaunfield"). Applicants respectfully traverse these rejections.

In order for a claims to be rendered invalid under 35 U.S.C. § 103, the subject matter of the claims as a whole would have to be obvious to a person of ordinary skill in the art at the time the invention was made. *See* 35 U.S.C. § 103(a). This requires: (1) the references must teach or suggest all of the claim limitations; (2) there must be some teaching, suggestion or motivation to combine references either in the references themselves or in the knowledge of the art; and (3) there must be a reasonable expectation of success. *See* MPEP 2143; MPEP 2143.03; *In re Rouffet*, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998).

As stated above, Applicants submit that Dugan does not disclose each limitation of the independent claims from which the above-referenced dependent claims depend. The Office Action presents no discussion that Shaunfield provides any disclosure of the missing limitations discussed above. Therefore, for the reasons discussed above with regard to the independent claims, Applicants respectfully submit that the combination of the references do not teach or suggest all of the claim limitations as required by 35 U.S.C. § 103(a). For at least these reasons, the combination of references cannot be said to render obvious Claims 7, 8, 19, 29, and 35.

**Dependent Claims 7, 19, 29, and 35:** Claims 7 and 19 have been amended, as discussed above, to provide consistency with independent claims from which these claims depend. Such amendment results in a clarification that the claimed protocol processing is performed on the claimed input datastream and on a claimed reconstructed output datastream. Applicants respectfully submit that neither Dugan nor Shaunfield provide disclosure of the protocol processing being performed on an input datastream or an output data stream, or the corresponding protocol processors.

As support for disclosure of protocol processing, the Office Action cites to Shaunfield 16:38-50:

The optical bus controller 120 includes an optical-electric interface 150, comprising a photo detector circuit 152 for converting the incoming optical signals on the downstream fiber 24a to corresponding serial electrical signals on line 156.

Shaunfield 16:38-42. Applicants respectfully submit that the cited disclosure refers to an optical bus controller that manipulates incoming and outgoing optical signals and not an input data stream to be decomposed or a reconstructed output data stream as claimed.

Applicants further respectfully submit that the Office Action does not establish a motivation to combine the references in the references themselves or in the art. Dugan discloses both a “4:1 wavelength division multiplexer circuit 46 [that] generates optical output” (Dugan 5:32-34) and a 1:4 wavelength division demultiplexer circuit connected to the optical fiber (Dugan 6:2-6) that are part of Dugan’s optical transmitter (Fig. 1) and optical receiver (Fig. 2), respectively. Since the optical transmitter and optical receiver of Dugan are both directly connected to the optical fiber, there is no suggestion to include Shaunfield’s additional optical bus controller. The Examiner must provide evidence to suggest the combination and “[b]road conclusory statements regarding the teachings of multiple references, standing alone, or not ‘evidence.’” *See In re Dembiczak*, 50 U.S.P.Q.

2d 1614, 1617 (Fed. Cir. 1999). Applicants respectfully submit that the particular part of the cited references relied upon by the Examiner and pertinence of each reference has not been clearly explained, especially with regard to the motivation to combine references in the first full paragraph on page 10 of the Office Action. Further, the Office Action does not establish that such a combination of the teachings in these references would meet with success, as required.

Even if it were taken that the combination of Dugan with Shaunfield resulted in an operable device (a supposition which Applicants present only for the sake of this argument), Applicants respectfully submit that the combination does not teach the invention as claimed. As stated above, Dugan does not disclose a high data rate input data stream being decomposed into a plurality of lower data rate data streams; instead Dugan takes a plurality of low data rate input data streams and combines them into a smaller plurality of higher data rate data streams. Shaunfield is not presented for a proposition that it corrects that defect of Dugan. Without such teaching, the combination cannot be said to render invalid the above-referenced claims.

**Dependent Claim 8:** The Office Action cites to Shaunfield 2:6-20 as providing disclosure of the claim limitation of performing compression on a one of said datastreams. As an initial matter, Applicants note that Claim 8 has been amended so that the claim limitation reads “performing compression on a one of said sub-streams, wherein said one of said sub-streams has a bandwidth greater than a corresponding one of said channels.” Applicants submit that such amendment has been made to provide a consistency with the disclosure in the application and to correct a clerical error in the original claims. Applicants respectfully submit that in light of the amended claim limitation and the arguments presented above, neither Dugan nor Shaunfield provide

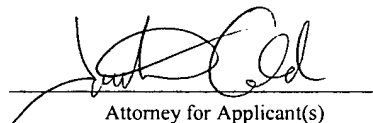
disclosure of such compression and that therefore the claim, as amended, is allowable as written.

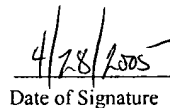
For the reasons given above, and those expressed for the independent claims, Applicants respectfully submit that Claims 7, 8, 19, 29, and 35, as amended, are in condition for allowance and request Examiner's indication of same.

### CONCLUSION

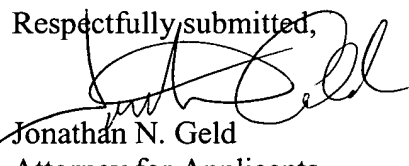
In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5090.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, COMMISSIONER FOR PATENTS, P. O. Box 1450, Alexandria, VA 22313-1450, on April 28, 2005.

  
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Date of Signature

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